

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 20733 4/25/2001]

[Docket No. 2001-NM-94-AD; Amendment 39-12201; AD 2001-08-24]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to all Boeing Model 737 series airplanes. This action requires revising the Airplane Flight Manual to prohibit extended dry operation of the center tank fuel pumps (with no fuel passing through the pumps). This action is necessary to prevent ignition of fuel vapors due to the generation of sparks and a potential ignition source inside the center tank caused by metal-to-metal contact during dry fuel pump operation, which could result in a fire or explosion of the fuel tank. This action is intended to address the identified unsafe condition.

DATES: Effective May 10, 2001.

Comments for inclusion in the Rules Docket must be received on or before June 25, 2001.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2001-NM-94-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-iarcomment@faa.gov. Comments sent via fax or the Internet must contain "Docket No. 2001-NM-94-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

Information related to this AD may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: Sherry Vevea, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1360; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: On March 3, 2001, a Boeing Model 737-400 series airplane caught fire and burned while parked at a bay at the Don Muang International Airport, Bangkok, Thailand. Although the accident investigation is ongoing and the probable cause of the accident has not been identified, the Government of Thailand, in conjunction with the National Transportation Safety Board, has determined that the center tank exploded shortly after the main fuel tanks of the airplane were refueled. It appears that the center tank fuel pumps were operating dry (no fuel was passing through the pumps) at the time of the explosion.

This accident is similar to the 1990 center tank explosion that occurred on a Boeing Model 737-300 series airplane. The ignition source of that explosion was never identified. The center tank fuel pumps were operating dry at the time of that explosion.

Extended dry operation of the center tank fuel pumps, which had occurred prior to both incidents, is contrary to the manufacturer's procedures for safe operation of the fuel pumps. Extended dry pump operation can result in overheating and excessive wear of the pump bearings and consequent contact between rotating and nonrotating parts of the pumps. Both overheating of the bearings and contact between rotating and nonrotating parts have the potential to create an ignition source in the form of hot surfaces or sparks. In addition, during dry operation of the pumps, ignition of vapor in a fuel pump can create a flame front that can reach the fuel tank and cause a fuel tank explosion.

In light of this information, the FAA finds that certain procedures should be included in the FAA-approved Airplane Flight Manual (AFM) for Model 737 series airplanes to prohibit dry operation of center tank fuel pumps. The FAA has determined that such procedures currently are not defined adequately in the AFM for these airplanes.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design, this AD is being issued to prevent ignition of fuel vapors due to the generation of sparks and a potential ignition source inside the center tank caused by metal-to-metal contact during dry fuel pump operation, which could result in a fire or explosion of the fuel tank. This AD requires revising the AFM to prohibit extended dry operation of the center tank fuel pumps.

Interim Action

This is considered to be interim action until final action is identified, at which time the FAA may consider further rulemaking.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 2001-NM-94-AD." The postcard will be date-stamped and returned to the commenter.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a “significant regulatory action” under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption “ADDRESSES.”

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2001-08-24 BOEING: Amendment 39-12201. Docket 2001-NM-94-AD.

Applicability: All Model 737 series airplanes, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent ignition of fuel vapors due to the generation of sparks and a potential ignition source inside the center tank caused by metal-to-metal contact during dry fuel pump operation, which could result in a fire or explosion of the fuel tank, accomplish the following:

Revision of Airplane Flight Manual (AFM)

(a) Within 7 days after the effective date of this AD, revise the Limitations Section of the FAA-approved AFM to include the following information. This may be accomplished by inserting a copy of this AD into the AFM.

“For ground operation, center tank fuel pump switches must not be positioned to “ON” unless the center tank fuel quantity exceeds 1,000 pounds (453 kilograms), except when defueling or transferring fuel.

Center tank fuel pump switches must be positioned to “OFF” when both center tank fuel pump low pressure lights illuminate.

Center tank fuel pumps must not be “ON” unless personnel are available in the flight deck to monitor low pressure lights.”

Alternative Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Operations Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 1: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Effective Date

(d) This amendment becomes effective on May 10, 2001.

FOR FURTHER INFORMATION CONTACT: Sherry Vevea, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1360; fax (425) 227-1181.

Issued in Renton, Washington, on April 18, 2001.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service